

Application No.: 10/500,014
Amendment Dated: April 4, 2011
Reply to Office Action of: January 5, 2011

MAT-8566US

Remarks/Arguments:

Claims 1, 3, 4, 7, 8, 15-21 and 24-30 are pending and rejected in the application. No claims have been amended. No new matter has been added.

Applicants' representatives would like to thank the Examiner and the Examiner's Supervisor for the telephone interview conducted on February 23, 2011. During the telephone interview, Applicants' representatives explained to the Examiner and the Examiner's Supervisor that the prior art references (Gwon, Sebastian, Warriar and Leung) cited in the rejection are deficient. Specifically, we argued that Gwon suggests a conventional handoff procedure which takes about 80-100msec to perform. Gwon's handoff time, however, is not the same as Applicants' claimed communication delay between the mobile node and the agents (it is the time to switch from one agent to the other agent). In response to our arguments, the Examiner and the Examiner's Supervisor agreed that the pending claims overcome the current rejections and that a new prior art search would have to be performed.

On page 2, the Official Action rejects claims 1, 3, 4, 7, 8, 15-21 and 24-27 under 35 U.S.C. § 103(a) as being unpatentable over Gwon (US 2003/0016655) in view of Sebastian (US 6,973,313), Warriar et al. (US 6,707,809) and Leung (US 6,195,705). On page 23, the Official Action rejects claims 28-30 under 35 U.S.C. § 103(a) as being unpatentable over Gwon in view of Warriar and Leung. It is respectfully submitted, however, that the claims are patentable over the art of record for at least the reasons set forth below.

Applicants' invention, as recited by claim 1, includes features which are neither disclosed nor suggested by the art of record, namely:

... measuring a first value of ... a communication delay time between the mobile node and a belonging home agent ...

... acquiring information about a new home agent when the first value is equal to or greater than a first predetermined value, the acquired information about the new home agent including a second value of ... a communication delay time between the mobile node and the new home agent ...

... changing from the belonging home agent to the new home agent when the second value is less than the first value ... (Emphasis Added)

Claim 1 relates to mobile node which changes from a belonging home agent to a new home agent based on communication delay. The mobile node acquires a communication delay between the mobile node and a new home agent when the communication delay between the mobile node and the belonging home agent is greater than a predetermined value (i.e., the mobile node looks for a new home agent when the current home agent delay is too large). This feature is at least supported on pages 21, line 23 to page 22, line 12 of Applicants' specification and furthermore, shown in Figs. 1 and 2. No new matter has been added.

Gwon's Fig. 2 shows a network where a mobile node is handed off between foreign agents. For example, mobile node 135 moves from position A to position C in a network, the mobile node changes from foreign agent R1 to foreign agent R2. Specifically, paragraphs 54-55 of Gwon describe a conventional handoff process between foreign agents where it optimally takes 80-100 msecs for the mobile node to be handed off from one foreign agent to the other foreign agent. Thus, the time range described in paragraph 51 of Gwon is only related to the time it takes to perform handoff (i.e., this time value is not related to an acquired time delay to a new home agent as suggested by the Examiner's arguments on page 28 of the Official Action).

Fig. 2 of Warriar suggests a system having a plurality of home agents (18, 18A and 18B). If mobile node 10 is registered to network 14, the messages sent to network 14 are forwarded from home agent 18 to the care of address of mobile node 10.

Fig. 2 of Leung suggests that mobile node 27 may be able to switch home agents. For example, if home agent 2 fails, then mobile node 27 will move to a new home agent (e.g., home agent 3). Thus, Leung's system only switches based on a failure of a home agent (not based on a communication delay of the current home agent).

Sebastian suggests a system that determines a optimal gateway for servicing a mobile client (i.e., the gateway with the smallest communication delay). For example, in Sebastian's Fig. 1, Sebastian's client 102 moves from position 102A in the network to position 102B. Upon switching to a foreign agent 132, Sebastian's system determines the optimum gateway in order to communicate between the foreign agent and home agent 112. Gateway 114 may be selected because the number of hops are the lowest. Thus, Sebastian's client 102 obtains the hop information from the gateways in response to switching to a different foreign agent.

Neither Gwon, Warriar, Leung, Sebastian nor their combination disclose or suggest a mobile node which acquires information about a new home agent when the communication delay to the current home agent is above a predetermined threshold.

As shown in Applicants' Fig. 1, mobile node 10 moves from position 13 to position 16 in the network. Mobile node 10 then measures the communication delay between mobile node 10 and home agent 11 (i.e., the delay to the current home agent). If the communication delay between the mobile node and the current home agent 11 exceeds a predetermined value (i.e. delay is too large), then the mobile node

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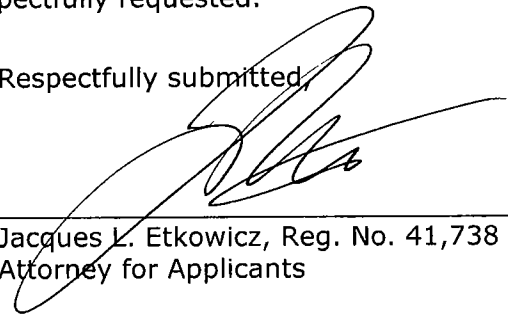
acquires communication delay information about new home agents. Mobile node 10 then compares the communication delay of the current home agent 11 to a new home agent (e.g. home agent 14). This comparison allows mobile node 10 to choose the home agent which has the smallest communication delay. This feature is at least described on page 21, line 23 to page 22, line 12 of Applicants' specification. Accordingly, for the reasons set forth above, claim 1 is patentable over the art of record.

Independent claims 15, 16, 19 and 28 include similar features to those of claim 1. Thus, these claims are also patentable over the art of record for at least the reasons set forth above.

Dependent claims 3, 4, 7-14, 17, 18, 20-27, 29 and 30 include all of the features of the claims from which they depend. Thus, these claims are also patentable over the art of record for at least the reasons set forth above.

In view of the arguments set forth above, the above-identified application is in condition for allowance, which action is respectfully requested.

Respectfully submitted,



Jacques L. Etkowicz, Reg. No. 41,738
Attorney for Applicants

RAE/fp

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P.O. Box 980
Valley Forge, PA 19482
(610) 407-0700

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